

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-29, 34, and 35 are currently pending. Claims 1, 11, 17, and 24 have been amended; and Claims 34 and 35 have been added by the present amendment. The changes and additions to the claims are supported by the originally filed specification and do not add new matter.¹

In the outstanding Office Action, Claims 1, 2, 4, 6, 11, 12, 14, 17, 19, 20, 24, 26, and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP Patent No. 2001270194 to Kobayashi (hereinafter “the ‘194 patent”) in view of U.S. Patent No. 7,164,486 to Nakamura et al. (hereinafter “the ‘486 patent”); Claims 3, 5, 7, 16, 18, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of the ‘486 patent and JP Patent No. 2001217972 to Kajita (hereinafter “the ‘972 patent”); Claims 9, 22, and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of the ‘486 patent and U.S. Patent No. 5,892,595 to Yamakawa et al. (hereinafter “the ‘595 patent”); Claims 8, 15, 21, and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of the ‘486 patent and U.S. Patent Application Publication No. 2002/0036643 to Namizuka et al. (hereinafter “the ‘643 application”); Claims 10 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of the ‘486 patent, the ‘643 application, and U.S. Patent Application Publication No. 2001/0019429 to Oteki et al. (hereinafter “the ‘429 application”); and Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of the ‘486 patent and U.S. Patent Application Publication No. 2001/0015821 to Namizuka et al. (hereinafter “the 821 application”).

¹ See, e.g., Figures 1-4 and 10, and the discussion related thereto in the specification.

REJECTION UNDER 35 U.S.C. § 103

Claim 1 is directed to an image forming apparatus, comprising:

an image reading device configured to read an image of an original document;

an image forming device configured to form an image on a sheet in accordance with image data read by the image reading device;

an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions for operating the image forming apparatus and to connect to the image forming apparatus via the operation unit connecting device;

a process controller configured to control an operation of at least one of the image reading device and the image forming apparatus; and

an expansion unit connecting device configured to connect an additionally attachable expansion unit, said additionally attachable expansion unit including an expansion control device and being configured to further connect to the operation unit detached from the image forming apparatus, wherein

said additionally attachable expansion unit connects to the image forming apparatus via the expansion unit connecting device, and

said process controller is configured to control the operation unit to operate, to receive a control command from the operation unit when the operation unit is attached to the image forming apparatus, and to receive the control command from the additionally attachable expansion unit when the additionally attachable expansion unit is attached to the image forming apparatus and the operation unit is attached to the additionally attachable expansion unit, the operation unit being detached from the image forming apparatus and attached to the additionally attachable expansion unit when the additionally attachable expansion unit controls the operation of the at least one of the image reading device and the image forming apparatus.

Regarding the rejection of Claim 1 under 35 U.S.C § 103(a), the Office Action cites the '194 patent for teaching all the limitations of Claim 1, except "wherein the expansion

control device, included in the additionally attachable expansion unit, is configured to allocate resources of the image forming apparatus, to each of a plurality of function of the image forming apparatus and the at least one function adding unit.” Rather, the Office Action cites the ‘486 patent for such a teaching.²

However, it is respectfully submitted that the ‘194 patent fails to disclose an expansion unit connecting device configured to connect an additionally attachable expansion unit, said additionally attachable expansion unit including an expansion control device and being configured to further connect to the operation unit detached from the image forming apparatus. Rather, as illustrated in Figures 1 and 4 of the ‘194 patent, an operating part 409 and 109 are connected to a master operating part control IC 405 and 105, respectively. Further, the ‘194 patent discusses external devices that are connected via respective UARTs.³ The ‘194 patent does not disclose that the external devices or UARTs are *configured to connect to the operating parts 409 and 109* detached from the image forming apparatus.

Further, the Office Action appears to cite the ‘194 CPU 102 and CPU 702 for teaching the claimed “process controller.”⁴ However, it is respectfully submitted that the ‘194 patent fails to disclose a process controller that is configured to control the operation unit to operate, to receive a control command from the operation unit **when the operation unit is attached to the image forming apparatus,** and to receive the control command from the additionally attachable expansion unit **when the additionally attachable expansion unit is attached to the image forming apparatus and the operation unit is attached to the additionally attachable expansion unit,** the operation unit being **detached from the image forming apparatus and attached to the additionally attachable expansion unit when the additionally attachable expansion unit controls** the operation of the at least one of the

² See Office Action dated November 4, 2008, page 6.

³ See ‘194 patent, paragraph [0018].

⁴ See Office Action dated November 4, 2008, pages 4-6.

image reading device and the image forming apparatus. Rather, with respect to the CPU 102, the '194 patent discusses that the (1) CPU 102 is used to fetch input data outputted by slave side operating part control IC 110 via master side operating control IC 105, (2) the CPU 102 notifies fax unit 213 of the key operating results via UART 106, (3), the fax unit 213 notifies the main body about the display data after changes have been made which correspond to the key operation, and the CPU 102 receives display data after changes have been made via UART 106, and (4) the CPU 102 sends display data after changes have been made, to slave side operating part control IC 110 via master side operating part control IC 105.⁵ Further, with respect to CPU 702, the '194 patent simply discusses that "when LCD and expanded feature switching key control is carried out by both CPU 702 and fax unit 713, a mediation circuit must be added to avoid a control collision."⁶ The '194 patent does not disclose that the CPU 102 or CPU 702 are configured to receive a control command from the operation unit *when the operation unit is attached to the image forming apparatus*, and to receive the control command from the additionally attachable expansion unit *when the additionally attachable expansion unit is attached to the image forming apparatus and the operation unit is attached to the additionally attachable expansion unit*. Further, the '194 patent does not disclose an operation unit that *is detached from the image forming apparatus and attached to the additionally attachable expansion unit when the additionally attachable expansion unit controls* the operation of the at least one of the image reading device and the image forming apparatus.

Moreover, it is respectfully submitted that the '486 patent fails to remedy the deficiencies of the '194 patent, as discussed above. The '486 patent is directed to an image forming apparatus, and expansion box for the image forming apparatus and image editing system.

⁵ See '194 patent, paragraph [0006].

⁶ Id. at paragraph [0021].

However, it is respectfully submitted that the '486 patent fails to disclose an expansion unit connecting device configured to connect an additionally attachable expansion unit, said additionally attachable expansion unit including an expansion control device and being configured to further connect to the operation unit detached from the image forming apparatus. Rather, Figure 2 of the '486 patent simply illustrates that an image forming apparatus 10 and expansion box 50 are connected to each other over a high-speed bus 22. The image forming apparatus 10 includes an operation panel 15, while the expansion box 50 includes a display 71 and inputting device 72. The '486 patent does not disclose that the expansion box 50 is *configured to connect to the operation panel 15* detached from the image forming apparatus 10.

Further, it is respectfully submitted that the '486 patent fails to disclose a process controller that is configured to control the operation unit to operate, to receive a control command from the operation unit when the operation unit is attached to the image forming apparatus, and to receive the control command from the additionally attachable expansion unit when the additionally attachable expansion unit is attached to the image forming apparatus and the operation unit is attached to the additionally attachable expansion unit, the operation unit being detached from the image forming apparatus and attached to the additionally attachable expansion unit when the additionally attachable expansion unit controls the operation of the at least one of the image reading device and the image forming apparatus. Moreover, it is noted that the Office Action does not cite the '486 patent for such a teaching.

Thus, no matter how the teachings of the '194 and '486 patents are combined, the combination does not teach or suggest the expansion unit connecting device configured to connect to an additionally attachable expansion unit, and the process controller, as defined in Claim 1. Accordingly, it is respectfully submitted that independent Claim 1 (and all

associated dependent claims) patentably defines over any proper combination of the '194 and '486 patents.

Claim 11 recites limitations analogous to the limitations recited in Claim 1. Further, Claim 11 has been amended in a manner analogous to the amendments to Claim 1. Accordingly, for reasons analogous to the reasons stated above for the patentability of Claim 1, it is respectfully submitted that independent Claim 11 (and all associated dependent claims) patentably defines over any proper combination of the '194 and '486 patents.

Claims 17 and 24 recite, in part,

detecting a presence of connection of the additionally attachable expansion unit that is configured to connect to the operation unit detached from the image forming apparatus, the additionally attachable expansion unit being connected to the image forming apparatus via the expansion unit connecting device; and

receiving, by the process controller, a control command from the operation unit when the operation unit is attached to the image forming apparatus, and from the additionally attachable expansion unit when the additionally attachable expansion unit is attached to the image forming apparatus and the operation unit is attached to the additionally attachable expansion unit, the operation unit being detached from the image forming apparatus and attached to the additionally attachable expansion unit when the additionally attachable expansion unit controls the operation of the at least one of the image reading device and the image forming apparatus.

As noted above, the '194 and '486 patents, alone or in proper combination, fail to disclose the expansion unit connecting device and the process controller recited in Claim 1. Thus, the '194 and '486 patents fail to disclose the methods of independent Claims 17 and 24, respectively. Accordingly, it is respectfully submitted that independent Claims 17 and 24 (and all associated dependent claims) patentably define over any proper combination of the '194 and '486 patents.

Regarding the rejections of dependent Claims 3, 5, 7, 16, 18, and 25, it is respectfully submitted that the '972 patent fails to remedy the deficiencies of the '194 and '486 patents, as

discussed above. Accordingly, it is respectfully submitted that dependent Claims 3, 5, 7, 16, 18, and 25 patentably define over any proper combination of the '194, '486, and '972 patents.

Regarding the rejections of dependent Claims 9, 22, and 29 under 35 U.S.C. § 103(a), it is respectfully submitted that the '595 patent fails to remedy the deficiencies of the '194 and '486 patents, as discussed above. Accordingly, it is respectfully submitted that dependent Claims 9, 22, and 29 patentably define over any proper combination of the '194, '486, and '595 patents.

Regarding the rejections of dependent Claims 8, 15, 21, and 28 under 35 U.S.C. § 103(a), it is respectfully submitted that the '643 application fails to remedy the deficiencies of the '194 and '486 patents, as discussed above. Accordingly, it is respectfully submitted that dependent Claims 9, 22, and 29 patentably define over any proper combination of the '194 patent, the '486 patent, and the '643 application.

Regarding the rejections of dependent Claims 10 and 23 under 35 U.S.C. § 103(a), it is respectfully submitted that the '429 application fails to remedy the deficiencies of the '194 patent, the '486 patent, and the '643 application, as discussed above. Accordingly, it is respectfully submitted that dependent Claims 10 and 23 patentably define over any proper combination of the '194 patent, the '486 patent, the '643 application, and the '429 application.

Regarding the rejection of dependent Claim 13 under 35 U.S.C. § 103(a), it is respectfully submitted that the '821 application fails to remedy the deficiencies of the '194 and '486 patents, as discussed above. Accordingly, it is respectfully submitted that dependent Claim 13 patentably defines over any proper combination of the '194 patent, the '486 patent, and the '821 application.

CONCLUSION

The present amendment also sets forth new Claims 34 and 35 for examination on the merits. No new matter has been added. It is respectfully submitted that these more detailed features are not disclosed or suggested by the applied references.

Thus, it is respectfully submitted that independent Claims 1, 11, 17, and 24 (and all associated dependent claims) patentably define over any proper combination of the '194 patent, the '486 patent, the '972 patent, the '595 patent, the '643 application, the '429 application, and the '821 application.


Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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